UCTION OF COPPER ALLOY HAVING EXCELLENT STRESS EF RESISTANT CHARACTERISTIC

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Abstract

PURPOSE:To produce a Cu alloy which has an excellent stress relief resistant characteristic, exhibits high electrical conductivity and is inexpensive by subjecting the specifically composed Cu alloy consisting of Ni, Si and Cu to a soln. heat treatment at a high temp. then to an aging treatment at an adequate temp. CONSTITUTION:The Cu alloy consisting of 0.4-4.0wt% Ni and 0.1-1.0% Si, and if necessary, 0.001-2.0% >=1 kinds among P, Sn, As, Cr, Mg, Mn, Sb, Fe, Co, Al, Ti, Zr, Be and Zn and the balance Cu and unavoidable impurities is subjected to the soln. heat treatment at >=700 deg.C such a manner that the crystal grain size attains >=5mum. The above-mentioned Cu alloy is thereafter subjected to cold working at <=95% reduction of area according to need then to the aging treatment at 350-700 deg.C. The worked alloy is subjected to cold working at 20-95% reduction of area when needed and further to the heat treatment at 150-800 deg.C at which the alloy is not recrystallized. The Cu alloy having the excellent stress relief resistant characteristic is obtd. by the above- mentioned treatment.